AMENDMENTS TO THE DRAWINGS

Eight replacement drawing sheets of FIGS. 1 - 8 replace the original drawing

sheets of FIGS. 1 - 8, and are attached to this amendment.

Attachment: 8 replacement sheets.

MR1957-533
APPL. NO. 09/838,223
Response to Office Action of 5 May 2005 & Notice
of Non-Compliant Amendment dated 6 May 2005

REMARKS

This case has been reviewed and analyzed in view of the Official Action dated 5 May 2004 and the Notice of Non-Compliant Amendment dated 6 May 2005. The paragraphs below provide a detailed response to the rejected items and a description of the difference between the invention and the cited prior art. The Claims have been amended to clarify the combination of elements which from the invention of the subject Patent Application.

Correction of grammatical, idiomatic and translational errors associated with the Specification and Abstract, as filed, have been made and shown in the attached "CLEAN COPY OF AMENDED SPECIFICATION" (Substitute Specification), in compliance with 37 C.F.R. § 1.125. The Substitute Specification is being inserted for purposes of clarity and ease of understanding by the Examiner. The Substitute Specification includes the same changes as are indicated in the marked-up copy of the Specification. No new matter has been incorporated by this Amendment.

1. The Examiner rejected Claims 1, 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen(US Patent No. 5,414422) in view of Shimamura (US Patent No. 4,977,536). The Examiner has stated:

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As to claim 1, Allen teaches an auxiliary device for editing documents (See

Figs 1-2,items 28, 28',Col. 1, Lines10-14),comprising: a computer keyboard

having an internal circuit with a single-chip microprocessor (See Fig. 1-2,

items 28, 28' ,Col. 5, Lines 35-38 and Col. 6,Lines 10-15); and a modular key

set with a document editing function (See Fig 1-2, items 28, 28'Col. 1,

Lines10-14 and Col. 4,Lines 42-44); the modular set being arranged on

computer keyboard (See Fig. 2, item 28' ,Col. 6, Lines 4-21) and connected to

an I/O bus of single-chip microprocessor (See Figs. 1-2, items 28, 28', Col.5,

Lines35 38 and Col. 6, Lines 10-15);single-chip microprocessor generating a

pseudo composite-key code corresponding to a individual key in the modular

key set pressed by a user (See Figs. 1-2, items 28, 28' , from Col. 4, Line 66

to Col. 5, Line 14); whereby the user can directly edit a document by using

the modular key set provided on the computer keyboard without chording

(See Figs.1-5, items 34, 36, Col.5, Lines 12-14); modular key set including a

cut key, a paste key, a copy key (See Figs 1-5, items 34, 36, Col. 5, Lines 38 -

42).

Shimamura teaches mark keys for dividing the document data into large

blocks (See Fig. 2, 10,items 12, 14, 12A, 14A, Col. 2, Lines 35-49 and Col.

5,Lines 18-31).

It would have been obvious to one of ordinary skill in the art at the time of invention to add mark key as shown by Shimamura to the modular set in the Allen apparatus to identify a segment of a document to be copied or cut in order to provide a document processor which can easily process document (See Col. 1, Lines 38-41 in the Shimamura reference).

As to claims 10-12, Allen teaches modular key set corresponding to the cut, paste and copy keys (See Figs. 1-5, items 34, 36, Col. 5, Lines 38-42) corresponding to the pseudo composite-key code (See Col.6, Lines 22-29).

Allen teaches mouse keys to mark particular location and data blocks to identify a segment of a document to be copied or cut (to indicate which data is targeted for manipulation in the Allen reference) (See Figs. 1-2, items 30, 32, Col. 4, Lines 37-41 and Col. 6, Lines 60-64).

Since Allen teaches that the data manipulation keypad may be reprogrammed by the user (See Col. 5, Lines 42-50), corresponding to the pseudo composite-key code (See Col.6, Lines 22-29), it would have been obvious to one of ordinary skill in the art at the time of invention to add (move) mark key to the modular set in the Allen apparatus to identify a segment of a document to be copied or cut in order to expediently perform data manipulation operations (See Abstract in Allen reference).

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Response to Examiner's Point No. 1:

Before discussing the prior art relied upon by the Examiner, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. The invention of the subject Patent Application is directed to an auxiliary device for editing documents. An auxiliary device for editing documents, comprising: a Windows® operating PC system peripheral input device having an internal circuit with a single-chip microprocessor; and a direct access modular key set with a document editing function; the direct access modular key set being arranged on the standard Windows® operating PC system peripheral input device and connected to an I/O bus of the single-chip microprocessor; the single-chip microprocessor generating a predetermined pseudo composite-key code responsive to an individual key in the direct access modular key set being pressed by a user; the pseudo composite-key code being formed by the group of codes representing simultaneous key switch operation, codes representing sequential key switch operation, and combinations thereof to execute the Windows® operating system/ Office application specific actions, whereby the user can directly edit a document on Windows® operating system/ Office® application by using the direct access modular key set provided on the computer peripheral input device without chording or memorize the combination keys, wherein pressing the direct access modular key with a single tough of direct access modular key can launch target Windows®

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operating system/ Office® application pre-define functions directly, the direct access modular key not require additional hardware(such as external ROM or separate cable), processing, complex driver support expect the code-conversion application software; the pseudo composite code is generated by a code-conversion application software or send through standard Windows® operating PC system peripheral input devices ports by one cable, such as USB port or PS2 port to Windows® operating system/ Office® application.

Another feature of the invention, as defined in Claim 5, is the code-conversion application software transfer specific code to pseudo composite-key code and load after Windows® operating system is being actuated.

It is respectfully submitted that the Allen reference as following below:

I. The Allen reference are treated like and following the IBM SAA/CUA standard signals for a manipulation key pad (See, Col.3, Lines 38-45).

II. The said keypad include a microprocessor and a adding read only memory (external ROM) wherein each predefined multiple key sequence key is controlled by said microprocessor and said adding external ROM stores reconfiguration programs (See, Col.8, Lines 1-5, Claim 1). The said computer includes a permanent memory, wherein each predefined multiple key sequence key is configurable, and wherein said key configuration is preserved in said computer permanent memory and

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restored to keypad when the system is power cycled (See, Col.8, Line 6-

11, Claim5).

III.   The keyboard sequences representing data, The keyboard sequences

representing data, the "Ctrl+Delete" for CUT function (See, Col.8, Line

12-19, Claim6) and the "Shift+Insert" for INSERT function (See, Col.8,

Line 20-27, Claim7) and the "Ctrl+Insert" for Copy function (See, Col.8,

Line 28-35, Claim8).

The filed of invention reference is different to the Allen reference, see below:

I.   The filed of invention reference are following the Windows® operating PC

system peripheral input devices standard signals for peripheral device. The

standard signal with capability to compatible with Windows® operating PC

system standard peripheral input devices port, such as PS2 port or USB

ports. The Allen patent filed on 1994 year, it does not show Windows®

operating PC system (PS2 port or USB port). The Allen reference shows a

keypad through one cable connect to PC and another keyboard through one

cable connect to PC (See, Fig 1).   As everyone know the standard

Windows® operating PC system just have one PS2 ports for Keyboard only.

So, the Allen reference fail to show and compatible with the Windows®

operating PC system and it just follow the old IBM Spec.

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II.   The filed of invention reference require a single-chip microprocessor only,

not require additional hardware, such as external ROM or separate cable/

connector support. The Allen teach keypad/ keyboard require a

microprocessor and a adding read only memory (external ROM) and each

predefined multiple key sequence key is controlled by said microprocessor

and said adding ROM stores reconfiguration programs. The said computer

require a permanent memory also and each predefined multiple key

sequence key is preserved in said computer permanent memory and

restored to keypad when the system is power cycled. However, the

Windows® operating system working in protection mode, so the sequence

key preserved in said computer permanent memory can not pass

information to the Windows® operating system. To use the code-conversion

application software and load after Windows® operating system is being

actuated, it is the only way to transfer specific code to target pseudo

composite-key code, but the Allen does not show also.

III.   The filed of invention reference the Windows® operating PC system

peripheral input devices consisting of a cut key, a paste key, a copy key

and mark key for launch Windows® operating system/ Office® application

pre-define function directly. The pseudo composite-key code of the Cut

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key is CTRL+X; Paste key is CTRL+V, or ALT+E, P; Copy key is

CTRL+C and generated by a code-conversion application software or send

through USB port or PS2 port to Windows® operating system/ Office®

Application. The Allen teach multiple key sequence key is "Ctrl+Delete"

for CUT function and the "Shift+Insert" for INSERT function and the

"Ctrl+Insert" for Copy function, wherein the default sequence can not

compatible with different language Windows® operating system and should

be require to redefine. For example: the "Ctrl+Delete" can not cut the file

while working on WinXP. However, Allen fails to show the code-

conversion application software solution, so no way for redefine the said

multiple key/ sequence key. The Allen teaches moving mouse for mark

particular location and data blocks, wherein follow the Allen descript

method still require moving hand between keyboard and mouse. Allen fails

to show the solution for keep hand on one device for operation solution, but

it shows in the filed invention already.

The Shimamura reference fails to overcome the deficiencies of Allen, Shimamura

teaches press a target for dividing the document data into large blocks, the purpose

for comprises a memory for storing document information only and not for editing.

Therefore, the combination of Allen and Shimamura cannot make obvious the

invention of the subject Patent Application, as now claimed.

2.   The Examiner rejected Claims 2 under 35 U.S.C. 103 (a) , as being

unpatentable over Allen and Shimamura in view of Krause et al. (US

Patent No. 6,154,757). The Examiner has stated:

Allen and Shimamura Krause et al. teaches shortcut keys which automatically

advance the text displays (See Fig. 4B, item 447, in description See Col. 10, Lines 33-39).

It would have been obvious to one of ordinary skill in the art at the time of invention to

implement short-cut key as shown by Krause et al. in Allen and Shimamura apparatus in

order to enhanced a user ability for moving around with a text (See Col. 1, Lines 24-29 in

Krause et al. reference).

Response to Examiner's Point 2:

The Krause invention is for target software only and all related functions are

software keys. The design purpose, design method, hardware and redefinition process are

completely different than that shown in the present subject Patent Application claim2 & 3

now. The Krause reference teaches one target software application, allowing users to

define the short-cut keys through an opening in a dialog box. In the Krause reference,

users have to remember the software short-cut key definitions process, or they are unable

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to use the software short-cut keys. The Krause shows the short-cut key redefinition

process and the software short-cut key functions (pop up dialog box select items) still

require target device for selection (such as a mouse serial click). The Krause fail to show

compatible with Windows® operating system also and Allen, Shimamura do not show

short-cut key. However, the present invention claim 2&3 shows a real physical short-cut

key for launching any Windows® operating system associated program and not software

key only. So, the combination of Allen, Shimamura and Krause et al. cannot make

obvious the invention of the subject Patent Application, as now claimed.

3.   **The Examiner rejected Claims 24 under 35 U.S.C. 103 (a) , as being**

unpatentable over Allen, Shimamura and Krause et al. as an

aforementioned in claim 2 in view of Kraft. The Examiner has stated:

.The Kraft teaches paste key out of modular set (See 2-3, 8, items 2-3, in

description See Col. 4, Line 56-68 and Col. 5, Lines 1-12).

It would have been obvious to one of ordinary skill in the art at the time of

invention to add modular key set different keys as shown by kraft in the Allen,

Shimamura and Krause et al. apparatus to use predetermined pseudo composite-key code

of modular key set in order to provide a method of transferring data from one application

to another (See Col. 1, Lines 46-49 in Kraft reference).

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Response to Examiner's Point 3:

The Kraft invention for cell phone is not directed towards Windows® operation

PC system peripheral input device. The hardware is completely different than that shown

in the present subject Patent Application and cannot operate on a computer. The Kraft

reference has a paste item for selection and is controlled by software along with a

software key and the design method is completely different from that of the present

application. Thus, the combination of Allen, Shimamura, Krause et al. and Kraft cannot

make obvious the invention of the subject Patent Application, as now claimed.

4. **The Examiner rejected Claims 3, 14-23 under 35 U.S.C. 103 (a) , as**

   being unpatentable over Allen and Shimamura as aforementioned in

   claim 1 in view of Hsu et al. (US Patent No. 6,320,519 B1). The Examiner

   has stated:

Hsu et al. teach switch key (symbol key) with LED (for Scroll Lock key)and a

plurality of composite keys and the functions of the composite keys controlled by a

switch key (See Fig. 1-2, item 15-26, in description See Col. 3, Line 37 and Col. 4, Lines

58-67, Col. 5, Lines 58-68).

It would have been obvious to one of ordinary skill in the art at the time of

invention to implement switch key to modify composite keys for redo, undo, bold, open,

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new, save, find, forward and function keys F1-F12 as shown by Hsu et al. in the Allen

and Shimamura apparatus to use predetermined pseudo composite-key code of modular

key set in order to switch a plurality of switchable keys between a first key code set and

second key code set with a single modifier key (See Col. 2, Lines 17-20 in Hsu et al.

reference).

Response to Examiner's Point 4:

The Hsu reference, U.S. Patent No. 6,320,519, was filed on October 21, 1998.

The same inventor as the present application, "Rich Chen" filed a similar patent on April

3, 1997 (Patent No. 6,011,495 for a multimedia keyboard structure) and it is noted that

this was before the Hsu reference.

The Hsu reference uses a standard modified key set including control, shift and alt

in order to control dual function keys, however, the Rich Chen reference uses a standard

key including Scroll Lock keys or Num lock keys for controlling dual function keys.

Dual function keys built with the standard key function and hot key function (as a

multimedia function). The multimedia function includes CDs, video, fast forward/rewind,

volume up/down, mute, www, e-mail, etc. (see column 5, lines 58 – 68 in Hsu). The

multimedia technology and problems thereof are shown in the background invention of

the present application, the multimedia technology complete different from the present

application. The Hsu reference and the Rich Chen reference patent fail to show a

modular key set for generating pseudo-composite-key codes and do not have the capability to control application internal functions, such as cut, paste, copy, new, open, save, reply, send, undo, redo,... etc.

However, in order to use the standard key or modified keys for control lead to some "lead to malfunctions" and other indicator problems. Thus, the present application adds an extra switch and light element.

The Hsu reference teaches one of the switch keys, such as the "alt, control, shift" being first pressed and held in combination with a pressed modifiable key, which can be a function key, a character key or a symbol key, etc. (See Fig. 2, column 4, lines 58 – 67 in the Hsu reference). However, the Hsu reference only allows the combination interrupts in an action under DOS, but fails to show with capability to compatible with Windows® Operation System/application. Otherwise, the leads to "lead to malfunctions" problems should be occurring. The Hsu reference further requires the pressing of one key, then the pressing of another key (two keys pressed) for launching DOS functions. The end-user is still required to memorize the combination keys.

The subject Patent Application show the Windows® operating PC system peripheral input device is provided with a plurality of function keys and an extra adding switch key, said extra adding switch key being connected to the I/O bus of the single-chip microprocessor and controlling function of the function keys to operate in one of a

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standard function key mode or an augmentation mode, a status of the extra adding switch key being manifested by a light-emitting indicator, said augmentation mode defining editing function is selected from a group consisting of redo, undo, open, new, hold, save, find, forward and send, said augmentation mode launching the direct access modular key set function that pre-define by Windows® operating system/ Office® Application.

The Hsu teach to use keyboard standard key in order to control dual function keys, but fail to show additional extra switch and extra light-emitting indicator (Hsu teach use standard key as a switch function key and standard LED for indicator, the same inventor as the present application shows in Patent No. 6,011,495 already and early then Hsu). The subject Patent Application solution is easy to show indicator status. This extra indicator can be put on a device or on the screen also. The Hsu (U.S. Patent No. 6,320,519) uses keyboard 3 with a standard LED for indicator status, which may confuse the user. As is well known, the three standard LED indicators built on the keyboard are controlled by the Windows Operating System. The Windows Operating System remembers and updates the status anytime. In case, the wrong status is sometimes generated, such as when the user turns off the Caps Lock LED indicator, but presses the modifier key later (for switch dual function), if the user types a letter at this moment, it will show the wrong upper case or lower case.

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In the system of the subject Patent Application, an extra switch key 3 (labeled OFFICE KEY LOCK) is utilized to switch the function keys to operate in one of a standard function key mode or an augmentation mode. The adding of the extra light-emitting element is used for showing status. Thus, in the invention shown in the subject Patent Application, only the desired key codes are transmitted in order to avoid any possibility of software incompatibility.
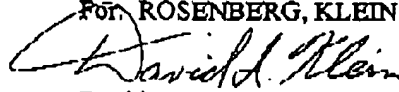
So, even combination of Allen, Shimamura and Hsu et al. cannot make obvious the invention of the subject Patent Application, as now claimed.

For all the foregoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

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APPL. NO. 09/838,223
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It is respectfully noted that this Amendment and response was prepared by

Applicant and has been corrected only for format. The Amendment and response

prepared by the Applicant is being filed by the undersigned attorney.

Respectfully submitted,
For ROSENBERG, KLEIN & LEE

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DAVID I. KLEIN   9/6/2005
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